

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Sammy M. Chau et al.

Application No.: 10/825,089

Confirmation No.: 7160

Filed: April 15, 2004

Art Unit: 2617

For: INTELLIGENT WIRELESS SWITCH (IWS)
AND INTELLIGENT RADIO COVERAGE
(IRC) FOR MOBILE APPLICATIONS

Examiner: M. G. Manoharan

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Further to 37 C.F.R. § 41.37(a), this brief is filed within two months of the Notice of Appeal filed on August 27, 2008.

The fees required under 37 C.F.R. § 41.20(b)(2) were previously paid with the Appeal Brief filed March 14, 2008.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1205:

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| I. | Real Party In Interest |
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I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

Hong Kong Applied Science and Technology Research Institute Co., Ltd., 5th Floor, 2 Science Park East Avenue, Hong Kong Science Park, Pak Shek Kok, Sha Tin, New Territories, Hong Kong, CHINA

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 18 claims pending in application.

B. Current Status of Claims

1. Claims canceled: None
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 1-18
4. Claims allowed: None
5. Claims rejected: 1-18

C. Claims On Appeal

The claims on appeal are claims 1-18

IV. STATUS OF AMENDMENTS

Applicant did not file an Amendment after the last rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each independent claim involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R.

§ 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. However, the citation to passages in the specification and drawings does not imply that the limitations from the specification and drawings should be read into the corresponding claim element.

According to independent claim 1, one embodiment of the claimed subject matter is a method of managing communications associated with a plurality of wireless devices (e.g. pg. 7, lines 4 – 6; Fig. 4). The method comprises detecting a first access point (e.g. pg. 7, lines 9 – 10; Fig. 4, 401) and associating a station of a wireless switch with the first access point (e.g. pg. 7, lines 8 – 9; Fig. 4, item 400). The method further comprises routing data between the plurality of wireless devices and the first access point using the first station (e.g. pg. 7, lines 12 – 13; Fig. 4, 403). The method also comprises detecting a second access point (pg. 7, line 15; Fig. 4, 405) and associating a second station of the wireless switch with the second access point (e.g. pg. 7, lines 16 – 17; Fig. 4, 406). The method also includes monitoring signal strengths of the first and second access points as received by the first and second stations (e.g. pg. 7, lines 20 – 21; Fig. 4, 409) and switching to routing data between the plurality of wireless devices and the second access point using the second station in response to the monitoring (e.g. pg. 7, lines 21 – 23; Fig. 4, 410 & 411).

According to independent claim 9, one embodiment of the claimed subject matter is a wireless switch system for managing communications of a plurality of wireless devices (e.g. pg. 5, lines 27 – 28; Fig. 3). The system comprises an internal access point for managing a wireless local area network (WLAN) that includes the plurality of wireless devices (pg. 5, lines 15 – 16; Fig. 2, 202) and a plurality of stations (e.g. pg. 5, lines 21 – 22; Fig. 2, 201-1, 201-2) for communicating with external access points. The system further comprises a

packet switch controller (e.g. pg. 5, lines 19 – 21, Fig. 2, 203) for routing data between the plurality of wireless devices and external access points using the plurality of stations (e.g. pg. 5, lines 19 – 21, Fig. 2, 203). The packet switch controller is operable to switch communications between the plurality of stations in response to signal strengths received from the plurality of access points crossing threshold values (e.g. pg. 5, lines 21 – 22; Fig. 2, 203).

According to independent claim 13, one embodiment of the claimed subject matter is a wireless system. The wireless system comprises a plurality of access points (e.g. pg. 5, lines 28 – 29; Fig. 3, items 103-1 & 103-2) and a wireless switch (e.g. pg. 5, lines 30 – 31; Fig. 3, 200). The wireless switch comprises a plurality of stations (e.g. pg. 6, lines 2 & 8; Fig. 3, 201-1 & 201-2) for communicating with said plurality of access points (e.g. pg. 5, lines 15 – 16; Fig. 3, 202). The wireless switch also comprises an internal access point (Fig. 3, item 202) for managing communication with a plurality of wireless devices (e.g. pg. 6, lines 25 – 26; fig. 3, 102); and a packet switch controller (e.g. pg. 6 lines 13 – 15, Fig. 3, 203) for directing data between the plurality of stations and the plurality of wireless devices. The packet switch controller switches between the plurality of stations in response to signal strengths received from the plurality of access points (e.g. pg. 6, lines 25 – 26; fig. 3, 102).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A. Claims 1, 2, 3, 8, 9, 11, 13 and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent 5,867,785 (filed Jan. 31, 1996, issued Feb. 2, 1999) to Averbuch et al (hereinafter “Averbuch”) in view of U.S. Patent application publication 2004/0058678 (filed Sep. 23, 2002) by deTorbal. (hereinafter “deTorbal”).
- B. Claims 4, 10 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Averbuch in view of deTorbal and further in view of U.S. Patent 5,268,933 (filed Sep. 27, 1991, issued Dec. 7, 1993) to Averbuch (hereinafter “Averbuch-2”).

- C. Claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Averbuch in view of deTorbal and further in view of U.S. Patent application publication 2003/0153316 (filed Feb. 12, 2002) by Noll et al. (hereinafter “Noll”).
- D. Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Averbuch in view of deTorbal and further in view of U.S. Patent application publication 2002/0160773 (filed Mar. 28, 2002) by Gresham (hereinafter “Gresham”).
- E. Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Averbuch in view of deTorbal and further in view of U.S. Patent 6,243,575 (filed Aug. 25, 1998, issued Jun. 5, 2001) to Ohyama et al. (hereinafter “Ohyama”).
- F. Claims 14 – 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Averbuch in view of deTorbal and further in view of Noll.

VII. ARGUMENT

The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. M.P.E.P. § 2142; *In re Peehs*, 612 F.2d 1287, 204 USPQ 835, 837 (CCPA 1980). In an obviousness rejection, “[u]nder § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 15 - 17 (1966). With regard to the claims rejected under 35 U.S.C. § 103(a) and now on appeal, the Office Action does not show that the claims are obvious under the framework set out in *Graham*. Appellants discuss below Appellee’s failure to establish a prima facie case of obviousness of the claims.

- A. Rejection of claims 1, 2, 3, 8, 9, 11, 13 and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over Averbuch in view of deTorbal.

1. The Independent Claims

a. Claim 1

Appellee has not properly ascertained the differences between the applied art and claim 1. To properly ascertain the differences between a claim and the applied art reference, as required under *Graham*, the claimed invention must be considered “as a whole.” *Panduit Corp. v. Dennison Mfg. Co.*, 1 USPQ2d 1593, 1595 – 96 (Fed. Cir.), *cert. denied*, 481 U.S. 1052. Without this “as a whole” analysis an obviousness rejection is flawed:

The “as a whole” instruction in title 35 prevents evaluation of the invention part by part. Without this important requirement, an obviousness assessment might break an invention into its component parts (A + B + C), then find a prior art reference containing A, another containing B, and another containing C, and on that basis alone declare the invention obvious. *Ruiz v. A.B. Chance Company*, 357 F.3d 1270, 69 USPQ2d 1686, 1690 (Fed. Cir. 2004).

Appellee has not considered claim 1 as a whole. Appellee’s failure to consider claim 1 as a whole is reflected in the selection of a primary art reference that does not provide the proper foundation for the current obviousness rejection.

Claim 1 recites, “associating a station of a wireless switch with said first access point . . . routing data . . . using said first station . . . associating a second station . . . with said second access point . . . monitoring signal strengths . . . as received by said first and second stations . . . switching . . . using said second station . . .” (Emphasis added). Appellee cites Averbuch as the primary art reference teaching the limitations of claim 1.

Averbuch does not teach a first and second station of a wireless switch. Appellee concedes as much: “Averbuch did not teach expressly first and second station of a wireless switch.” Office Action, page 3. It is instructive to note, however, that claim 1 does not only require the existence of a first and second station in a wireless switch. Instead, the steps of claim 1 also require using the first and second stations in particular ways. For example, one step of claim 1 requires that the first station is used for routing data between wireless devices and a first access point. Another step requires that the second station is used for associating with a second access point. A further step requires that there is switching to routing data between the wireless devices and a second access point using the second station in response

to signal strength monitoring of the first and second access points as received by the first and second stations.

Because Averbuch does not teach a first and second station, it also does not teach the steps that require the first and second stations being used in particular ways. Absent any teaching of a first and second station in Averbuch, therefore, Averbuch does not provide the necessary foundation for modification to meet claim 1.

Moreover, Appellee has used hindsight reconstruction to piece together alleged teachings in the applied art in an attempt to render the claims obvious. “A factfinder should be aware . . . of the distortion caused by hindsight bias” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007) (citing *Graham*). One form of impermissible hindsight bias is using the claims as an instruction manual:

It is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that “[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992) (quoting *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

In the Office Action, Appellee relies on deTorbal for teaching a first and a second station of a wireless switch. Appellee identifies item 22 as including a first station (item 24) and second station (item 26). Office Action, page 3. Item 26, however, is an on-board radio unit that includes items 22 and 24. Items 22, 24 and 26 individually or together do not disclose a first and second station of a wireless switch.

Items 22 and 24 are antennas of an on-board radio unit. Paragraph [0021]. The on-board unit does not operate as a wireless switch. Instead, the on-board unit 26 merely notifies a base station of an upcoming handover:

The on-board radio unit 26 monitors the position of the vehicle 20 as it travels along the planned route relative to the base stations which will serve the vehicle 20 along its route, e.g., by monitoring the latitude/longitude of the vehicle 20. At a certain position along the planned route, the OBRU 26 initiates a handover notification procedure to the upcoming base station B described below. That notification informs base station B in advance of the

upcoming group handover allowing the target base station B to prepare for the upcoming handover including reserving resources for the handover of the active mobile communications. Paragraph [0021].

In fact, deTorbal explicitly provides that on-board unit 26 does not operate as a wireless switch: “The on-board radio unit 26 does not control or become involved in the normal communications between the mobile radios 28 and the cellular network.” Paragraph [0025]. Because deTorbal’s on-board radio unit does not control or become involved in the normal communication, deTorbal does not teach a first and second station of a wireless switch.

In sum, Appellee has not established a prima facie case of obviousness of claim 1 because Appellee has not considered claim 1 as a whole, which has resulted in an inappropriate primary art reference being used in the rejection. Furthermore, Appellee uses improper hindsight reconstruction in rejecting claim 1. Accordingly, Appellants respectfully request that the Board reverse the rejection, under 35 U.S.C. § 103, of claim 1.

b. Claim 9

Claim 9 requires, “A wireless switch system . . . comprising . . . a plurality of stations for communicating with external access points” Appellee concedes that “Averbuch did not teach expressly plurality of stations for communicating with external access points.” Office Action, page 5. Despite Appellee’s concession that Averbuch does not teach a plurality of stations, Appellee nonetheless relies on Averbuch as teaching “a packet switch controller for routing data . . . using said plurality of stations, wherein said packet switch controller is operable to switch communications between said plurality of stations in response to signal strengths received from said plurality of access points crossing threshold values.” This anomaly where Appellee concedes Averbuch does not teach a plurality of stations and then asserts Averbuch teaches a packet switch controller that uses the plurality of stations illustrates that Appellee has not considered claim 9 as a whole.

Having conceded Averbuch does not teach a plurality of stations for communicating with external access points, Appellee relies on deTorbal to teach this limitation. Office Action, page 5. deTorbal, however, does not teach a wireless switch with a first and second stations. The on-board unit does not operate as a wireless switch. Instead, the on-board unit

26 merely notifies a base station of an upcoming handover. *See* paragraph [0025].

Therefore, to modify Averbuch with deTorbal is to improperly piece together isolated disclosures of the applied art in an attempt to render claim 9 obvious. Accordingly, Appellants respectfully request that the Board reverse the rejection, under 35 U.S.C. § 103, of claim 9.

c. Claim 13

Claim 13 requires a packet switch controller [that] switches between said plurality of stations in response to signal strengths” Appellee cites to Averbuch col. 5, lines 56 – 67 and col. 6 lines 1 – 9 as teaching this limitation of claim 13. Office action, page 6. The cited portion of Averbuch, however, does not teach switching between stations in response to signal strength. Instead, the cited portion of Averbuch teaches measuring signal strength, comparing the measurements to a threshold and then selecting a local set of resources:

Upon completing the measurements, the mobile system controller 200 compares the measurements to a predetermined threshold (e.g., C/I+N=18 dB) and selects the local set of resources 220-229, such that the selected resources do not substantially interfere with communication resources assigned to stationary base sites that produce control signals having signal quality measurements that exceed, or at least are of higher quality than, the threshold. As a result of this threshold comparison process, the mobile system controller 200 preferably selects the local set of resources 220-229 to be a subset of the communication resources assigned to a single stationary base site (e.g., 102) or a combination of communication resources assigned to a plurality of stationary base sites (e.g., 102, 108, 112).

Here, Averbuch does not mention or even suggest that the measured signal strength is used for switching between stations. As such, Appellee has not shown that Averbuch teaches the limitation of claim 13 requiring a packet switch controller that switches between stations in response to signal strengths. Moreover, deTorbal does not teach this limitation of claim 13. deTorbal does not teach a packet switch controller. Instead, deTorbal teaches an on-board radio unit (OBRU) for initiating an handover notification procedure. Paragraph [0021]. In sum, the combination of Averbuch and deTorbal does not teach all the limitations of claim 13. Accordingly, Appellants respectfully request that the Board reverse the rejection, under 35 U.S.C. § 103, of claim 13

2. Dependent Claims 2, 3, 8, 11 and 18

Claims 2, 3 and 8 depend from claim 1. Claim 11 depends from claim 9. Claim 18 depends from claim 13. Each of the dependent claims inherits the limitations of its respective independent base claim. As discussed above, Appellee has not shown a prima facie case of obviousness for the independent claims. At least for this reason, dependent claims 2, 3, 8, 11 and 18 are patentable over the applied art references. Accordingly, Appellants respectfully request that the Board reverse the rejections, under 35 U.S.C. § 103, of claims 2, 3, 8, 11 and 18.

- B. Rejection of claims 4, 10 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Averbuch in view of deTorbal and further in view of Averbuch-2.

Claims 4, 10 and 17 each depend from claims 1, 9 and 13 respectively. Claims 1, 9 and 13 have been shown above to be patentable over Averbuch and deTorbal. The tertiary reference does not cure these deficiencies. At least for this reason, the dependent claims 4, 10 and 17 are each patentable over the applied art. Moreover, claims 4, 10 and 17 themselves disclose limitations Appellee has not shown are taught by the applied art.

For example, claim 4 requires, “maintaining a connection with said second access point by communicating ping packets through said second access point.” Claim 10 requires, “wherein said packet switch controller maintains a connection with one of said plurality of access points by communicating ping packets through said one of said plurality of access points while data packets are communicated through another of said plurality of access points.” Claim 17 requires, “wherein said packet switch controller maintains a connection with one of said plurality of access points that is not currently used for data communications by routing ping packets through said one of said plurality of access points.” Appellee cites to Averbuch-2, col. 3, lines 1 – 44 as teaching these limitations of claims 4, 10 and 17. Office Action, page 7.

The cited portion of Averbuch-2, however, merely teaches the accurate synchronization of data packets when two base stations transmit the same voice or control data at the same time by sending a dummy packet and monitoring base station arrival time.

Thus, the dummy packet is merely used for testing arrival times for synchronizing. Using dummy packets for synchronizing does not teach the limitation of claim 4 requiring, “maintaining a connection with said second access point by communicating ping packets through said second access point.” Similarly, the limitations of claims 10 and 17 are not taught by Averbuch-2. Thus, Appellee has not shown that the applied art teaches all the limitations of claims 4, 10 and 17. Accordingly, Appellants respectfully request that the Board reverse the rejection, under 35 U.S.C. § 103, of claims 4, 10 and 17.

C. Rejection of claims 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Averbuch in view of deTorbal and further in view of Noll.

Claims 5 and 6 each depend from claim 1 which, has been shown above to be patentable over the applied art. At least for this reason, the dependent claims 5 and 6 are each patentable over Averbuch and deTorbal. The tertiary reference does not cure these deficiencies. Moreover, claims 5 and 6 themselves disclose limitations Appellee has not shown are taught by the applied art. These limitations are considered below.

a. Claim 5

Claim 5 recites, “operating a base station associated with said first access point by tracking movement of said plurality of wireless devices and said wireless switch using a directional antenna.” Appellee concedes that “[n]either Averbuch nor deTorbal teaches a base station associated with a first access point with a directional antenna.” Office Action, page 8. Appellee, therefore, relies on Noll for teaching the conceded deficiency of Averbuch and deTorbal. Appellee, however, has merely cited and asserted that a portion of Noll teaches a base station with an antenna. By citing that devices recited in a step of a method claim, exist in the applied art is insufficient to show that the applied art teach the step in question. “Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). Thus, Appellee’s reliance on Noll for the step at issue, namely “operating a base station associated with said first access point by tracking movement of said plurality of wireless devices and said wireless switch using a directional antenna,” is insufficient to meet the requirements of a proper obviousness rejection of claim 5 under *KSR*.

Accordingly, Appellants respectfully request that the Board reverse the rejection, under 35 U.S.C. § 103, of claim 5.

b. Claim 6

Claim 6 recites, “monitoring received signal strengths associated with respective patterns of antenna elements of said directional antenna; and switching between said patterns in response to monitoring received signal strengths associated with the respective patterns.” Appellee concedes, Averbuch in view of deTorbal does not teach this limitation of claim 6. Office Action, page 8. Appellee, relies on Noll as teaching these limitations missing from Averbuch and deTorbal.

Appellee’s citation to Noll, however, is directed to selecting of antenna elements for use by a base station in communicating with repeater stations and the adjustment of the phase or amplitude of RF signals received and transmitted by the antenna elements. Paragraph [0018], lines 1 – 15. In fact, Noll is generally directed to isolating communications that may interfere with each other. *See* Abstract (stating, “[t]he system selectively configures the first smart antenna system to spatially isolate communications on the first RF backhaul from communications on a second RF backhaul of a second repeater.”). Thus, Appellee has not shown that Noll teaches “monitoring received signal strengths associated with respective patterns of antenna elements of said directional antenna; and switching between said patterns in response to monitoring received signal strengths associated with the respective patterns,” as required in claim 6. Accordingly, Appellants respectfully request that the Board reverse the rejection, under 35 U.S.C. § 103, of claim 6.

D. Rejection of claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Averbuch in view of deTorbal and further in view of Gresham

Claim 7 depends from claim 1. Claim 1 has been shown above to be patentable over the applied art. At least for this reason, dependent claim 7 is patentable over the applied art. Moreover, claim 7 itself discloses limitations Appellee has not shown are taught by Averbuch and deTorbal. The tertiary reference does not cure these deficiencies. For example, Appellee states that “Averbuch in view of deTorbal teaches all the particulars of the claim except wherein the packets from the first access point that are associated with transmission control

protocol (TCP) sessions.” Office Action, page 9. Appellee relies on Gresham for the limitations Appellee concedes are missing from Averbuch and deTorbal. *Id.*

The cited portions of Gresham, however, do not teach the limitations of claim 7 at issue. Rather, the portion of Gresham on which Appellee relies teaches TCP/IP traffic between a remote computer terminal and a server. The server and computer are insufficient to teach first and second access points and first and second stations as described in claim 7. Therefore, Appellee has not shown switching that comprises “receiving packets from the first access point that are associated with transmission control protocol (TCP) sessions; and sending acknowledgement packets in response to said receiving using said second station” as required in claim 7. Accordingly, Appellants respectfully request that the Board reverse the rejection, under 35 U.S.C. § 103, of claim 7.

E. Rejection of claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Averbuch in view of deTorbal and further in view Ohyama.

Claim 12 recites, “when said packet switch controller switches communications between a first station to a second station, said switch controller distributes remaining packets received by said first station to said plurality of wireless devices and send acknowledgement packets through said second station.” Appellee concedes Averbuch in view of deTorbal does not teach this limitation of claim 12 and relies on Ohyama, col. 5, lines 12 – 33; Figure 4; col. 13, lines 40 – 63, as teaching this limitation of claim 12. The cited portion of Ohyama, however, does not teach this limitation of claim 12.

Instead of teaching the limitations of claim 12, the cited portion of Ohyama teaches that if the mobile base station 30 is connected to the existing base station 10 through a control channel, even if the quality of the connection deteriorates, “[t]he mobile base station 30 maintains the call of the subscriber terminal 40 **until it completes.**” Col. 5, lines 20 – 25 (emphasis added). If there is a new call, after the deterioration of the connection with base station 10 is detected, the mobile base station 30 handles the new call with a base station having a stronger connection than station 10, using a different control channel.

In other words, the cited portion of Ohyama merely teaches that the mobile base station connects new calls using channels giving the best quality of service, at the time,

irrespective of the channel used for previous calls. This teaching of Ohyama, therefore, is insufficient to teach the limitation of claim 12 requiring “when said packet switch controller switches communications between a first station to a second station, said switch controller distributes remaining packets received by said first station to said plurality of wireless devices and send acknowledgement packets through said second station.”

In sum, Appellee has not shown that the applied art teaches all the limitations of claim 12. Accordingly, Appellants respectfully request that the Board reverse the rejection, under 35 U.S.C. § 103, of claim 12.

F. Rejection of claims 14 – 16 under 35 U.S.C. § 103(a) as being unpatentable over Averbuch in view of deTorbal and further in view of Noll.

a. Claim 14

Claim 14, recites, “wherein one of said plurality of access points comprises a base station with a directional antenna, said base station comprising a controller that tracks movement of said wireless switch using said directional antenna through a coverage area of said one of said plurality of access points.” Appellee concedes Averbuch in view of deTorbal does not teach a base station with a directional antenna. Office Action, page 11.

Appellee then relies on Noll for teaching the deficiencies of Averbuch and deTorbal. In relying on Noll, however, Appellee has not considered claim 14 as a whole and has merely picked from Noll a teaching of a base station with an antenna. Appellants submit that Appellee’s picking and choosing isolated disclosures from Averbuch, deTorbal and Noll without reference to claim 14, as a whole, does not render claim 14 obvious.

To illustrate further, Appellants note that Noll is generally directed to isolating communications that may interfere with each other. *See* Abstract (stating, “[t]he system selectively configures the first smart antenna system to spatially isolate communications on the first RF backhaul from communications on a second RF backhaul of a second repeater”). Thus, Noll does not teach at least the limitations of claim 14 requiring “a controller that tracks movement of said wireless switch using said directional antenna through a coverage

area of said one of said plurality of access points.” Accordingly, Appellants respectfully request that the Board reverse the rejection, under 35 U.S.C. § 103, of claim 14.

b. Claims 15 and 16

Claims 15 and 16 require that “said controller of said base station monitors signal strengths received from said wireless switch by a plurality of patterns of discrete antenna elements of said directional antenna.” Appellee asserts that Noll, paragraph [0018], lines 1 – 15 teach the limitation of claims 15 and 16 requiring “monitoring signal strengths received from said wireless switch by a plurality of patterns of discrete antenna elements of said directional antenna.” There is no such teaching, however, in the cited portion of Noll. Rather, the cited portion of Noll teaches selecting of antenna elements for use by a base station in communicating with repeater stations and the adjustment of the phase or amplitude of RF signals received and transmitted by the antenna elements.

Moreover, as discussed above, Noll is directed to isolating communications that may interfere with each other. Appellee, therefore, has not shown that Noll teaches or suggest the limitations of claims 15 and 16 requiring “said controller of said base station monitors signal strengths received from said wireless switch by a plurality of patterns of discrete antenna elements of said directional antenna.” Accordingly, Appellants respectfully request that the Board reverse the rejection, under 35 U.S.C. § 103, of claims 15 and 16.

VIII. CLAIMS APPENDIX

A copy of the claims involved in the present appeal is attached hereto as Appendix A.

IX. EVIDENCE APPENDIX

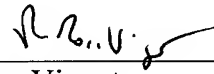
No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

X. RELATED PROCEEDINGS APPENDIX

No related proceedings are referenced in II. above, hence copies of decisions in related proceedings are not provided.

Dated: October 21, 2008

Respectfully submitted,

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CLAIMS APPENDIX

The claims on appeal are as follows:

1. A method of managing communications associated with a plurality of wireless devices, comprising:
 - detecting a first access point;
 - associating a station of a wireless switch with said first access point;
 - routing data between said plurality of wireless devices and said first access point using said first station;
 - detecting a second access point;
 - associating a second station of said wireless switch with said second access point;
 - monitoring signal strengths of said first and second access points as received by said first and second stations; and
 - switching to routing data between said plurality of wireless devices and said second access point using said second station in response to said monitoring.
2. The method of claim 1 further comprising: associating said plurality of wireless devices with an access point of a wireless switch.
3. The method of claim 1 wherein said monitoring comprises: applying a filtering function to received signal strengths.
4. The method of claim 1 further comprising:
 - maintaining a connection with said second access point by communicating ping packets through said second access point.
5. The method of claim 1 wherein said plurality of wireless devices and said wireless switch are moving in a common direction, the method further comprising:
 - operating a base station associated with said first access point by tracking movement of said plurality of wireless devices and said wireless switch using a directional antenna.

6. The method of claim 5 further comprising:
monitoring received signal strengths associated with respective patterns of antenna elements of said directional antenna; and
switching between said patterns in response to monitoring received signal strengths associated with the respective patterns.

7. The method of claim 1 wherein said switching comprises:
receiving packets from the first access point that are associated with transmission control protocol (TCP) sessions; and
sending acknowledgement packets in response to said receiving using said second station.

8. The method of claim 1 wherein said wireless switch is disposed within a transportation vehicle.

9. A wireless switch system for managing communications of a plurality of wireless devices, comprising:
an internal access point for managing a wireless local area network (WLAN) that includes said plurality of wireless devices;
a plurality of stations for communicating with external access points; and
a packet switch controller for routing data between said plurality of wireless devices and external access points using said plurality of stations, wherein said packet switch controller is operable to switch communications between said plurality of stations in response to signal strengths received from said plurality of access points crossing threshold values.

10. The wireless switch system of claim 9 wherein said packet switch controller maintains a connection with one of said plurality of access points by communicating ping packets through said one of said plurality of access points while data packets are communicated through another of said plurality of access points.

11. The wireless switch system of claim 9 wherein said packet switch controller applies a filtering function to received signal strengths.

12. The wireless switch system of claim 9 wherein when said packet switch controller switches communications between a first station to a second station, said switch controller distributes remaining packets received by said first station to said plurality of wireless devices and send acknowledgement packets through said second station.

13. A wireless system, comprising:
a plurality of access points; and
a wireless switch comprising:
a plurality of stations for communicating with said plurality of access points;
an internal access point for managing communication with a plurality of wireless devices; and
a packet switch controller for directing data between said plurality of stations and said plurality of wireless devices, wherein said packet switch controller switches between said plurality of stations in response to signal strengths received from said plurality of access points.

14. The wireless system of claim 13 wherein one of said plurality of access points comprises a base station with a directional antenna, said base station comprising a controller that tracks movement of said wireless switch using said directional antenna through a coverage area of said one of said plurality of access points.

15. The wireless system of claim 14 wherein said controller of said base station monitors signal strengths received from said wireless switch by a plurality of patterns of discrete antenna elements of said directional antenna.

16. The wireless system of claim 15 wherein said controller of said base station switches between said plurality of patterns in response to said monitoring.

17. The wireless system of claim 13 wherein said packet switch controller maintains a connection with one of said plurality of access points that is not currently used for data communications by routing ping packets through said one of said plurality of access points.

18. The wireless system of claim 13 wherein said wireless switch is mounted to a transportation vehicle.

EVIDENCE APPENDIX

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the Examiner is being submitted.

RELATED PROCEEDINGS APPENDIX

No related proceedings are referenced in II. above, hence there are no copies of decisions in related proceedings to be provided.